

WHAT IS CLAIMED IS:

1. A storage system comprising:
a movable accessor; and
a cartridge transport device configured to move a plurality of cartridges along a path, wherein the path includes a front side and a back side with respect to the movable accessor; wherein:
the movable accessor is configured to access a first group of the plurality of cartridges from the front side of the path, and
the cartridge transport device is operable to move the first group of the plurality of cartridges to the back side of the path to allow the movable accessor to access a second group of the plurality of cartridges; and the movable accessor is operable to move toward the second group of the plurality of cartridges while the cartridge transport device is operating.
2. A storage system according to Claim 1 further comprising:
a position sensor coupled to detect the position of the transport device; and
a controller coupled to the position sensor, wherein the controller is configured to determine whether to operate the transport device to provide access to a particular one of the plurality of cartridges.
3. A storage system according to Claim 1 further comprising:
inventory control logic operable to maintain identity and location information for each of the plurality of cartridges.
4. A storage system according to Claim 1 wherein the transport device includes:
a conveyor belt;
a drive member configured to move the conveyor belt; and
a drive motor coupled to receive drive command signals from the controller and to actuate the drive member.

5. A storage system according to Claim 4 wherein each end of the conveyor belt includes a hinge portion that can be fastened to install the conveyor belt in the transport device.

6 A storage system according to Claim 1 wherein the position sensor is one of the group of an optical, mechanical, magnetic, and electronic sensor.

7. A storage system according to Claim 4 wherein the conveyor belt includes: a plurality of connectors configured to attach the plurality of cartridges to the conveyor belt.

8. A storage system according to Claim 1 further comprising:
a mounting system installable in an enclosure, wherein the mounting system is capable of supporting at least a portion of the transport device.

9. A storage system according to Claim 8, further comprising:
a magazine configured to store at least of portion of the plurality of cartridges;
wherein the mounting system includes at least one support member, and a magazine guide attached to the at least one support member.

10. A storage system according to Claim 9 wherein the transport device is further configured to move the plurality of magazines through the magazine guide.

11. A storage system according to Claim 10 wherein the magazine guide includes a reference edge configured to engage a reference guide on the magazine.

12. A storage system according to Claim 9 wherein the magazine guide includes a roller coupled to the drive member, and the roller includes a flange at one end that is configured to retain a conveyor belt.

13. A storage system according to Claim 12 further comprising a drive member, wherein the drive member is coupled to a keyed rod, and the keyed rod is inserted through a slotted opening in the roller.

14. A storage system according to Claim 8 wherein the mounting system includes a roller coupled to the magazine guide on an adjustable mount, and the adjustable mount facilitates installation of the transport device on the mounting system.

15. A storage system according to Claim 8 wherein the mounting system is vertically stackable to another mounting system.

16. A storage system according to Claim 1, wherein the path is substantially horizontal.

17. A storage system according to Claim 1, wherein the path is substantially vertical.

18. A method for operating an automated storage system comprising:
configuring a first plurality of cartridges along a first side of a path;
configuring a second plurality of cartridges along a second side of the path;
receiving a request to access a particular cartridge; and
moving an accessor toward the particular cartridge; and
moving the cartridges along the path to allow the accessor to access the particular cartridge.

19. A method according to Claim 18 further comprising:
maintaining identity and location information for the particular cartridge.

20. A method according to Claim 19, wherein a plurality of cartridges are storable in a magazine, the method further comprising:
maintaining identity and location information for the plurality of cartridges; and
determining which of the plurality of cartridges to access to fulfill the request for the particular item.

21. A storage system comprising:
a first set of storage means on a first side of a storage wall;
a second set of storage means on a second side of a storage wall;

transport means connected between the first side and the second side of the storage wall;

logic means for determining when to operate the transport means to move a portion of the first set of storage means to the second side of the storage wall; and

a movable accessor operable to move independently of the transport means to access the portion of the first set of storage means from the first side of the storage wall.

22. A computer product for managing a storage system comprising:
control logic operable to control a transport mechanism to move an assembly of storage components in the storage system from one side of a storage wall that is not accessible by an access device to another side of the storage wall that is accessible by the access device; and
control logic operable to re-locate a movable access device along the other side of the storage wall to access the storage components.

23. A computer product according to Claim 22 further comprising:
control logic operable to maintain separate logical storage libraries with subgroups of the storage components.

24. A computer product according to Claim 22 further comprising:
control logic operable to maintain inventory records of storage components in the storage system.

25. A computer product according to Claim 22 further comprising:
control logic operable to control physical access to the storage components.